In the Claims

CLAIMS

Claims 1-35 (Canceled).

36. (Currently amended) A method of forming a structure over a semiconductor substrate, comprising:

forming a silicon-dioxide-containing layer physically against the substrate;

exposing the silicon-dioxide-containing layer to an activated nitrogen species formed from plasma conditions to provide ~~the providing~~ nitrogen within the silicon-dioxide-containing layer, substantially all of the nitrogen within the silicon-dioxide-containing layer being spaced from the substrate; and

after the exposing to provide ~~providing~~ the nitrogen within the silicon-dioxide-containing layer, forming conductively doped silicon on the silicon-dioxide-containing layer.

37. (Previously presented) The method of claim 36, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein substantially all of the nitrogen is within the top 30 angstroms of the silicon-dioxide-containing layer.

38. (Previously presented) The method of claim 36, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein substantially all of the nitrogen is within the top 10 angstroms of the silicon-dioxide-containing layer.

39. (Previously presented) The method of claim 36, wherein an entirety of the nitrogen within the silicon-dioxide-containing layer is spaced from the substrate.

40. (Previously presented) The method of claim 39, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein substantially all of the nitrogen is within the top 10 angstroms of the silicon-dioxide-containing layer.

41. (Previously presented) The method of claim 39, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein no measurable nitrogen is below the top 30 angstroms of the silicon-dioxide-containing layer.

Claim 42 (Canceled).

43. (Currently amended) A method of forming a structure over a semiconductor substrate, comprising:

forming a silicon-dioxide-containing layer physically against the substrate, the silicon-dioxide-containing layer having an upper portion and a lower portion, the upper portion being spaced from the substrate by the lower portion;

after forming the silicon-dioxide-containing layer, exposing the silicon-dioxide-containing layer to nitrogen ions to provide ~~providing~~ nitrogen within only the upper portion of the silicon-dioxide-containing layer; and

after providing the nitrogen within only the upper portion of the silicon-dioxide-containing layer, forming conductively doped silicon physically against the upper portion of the silicon-dioxide-containing layer.

44. (Previously presented) The method of claim 43, wherein the lower portion is about 10 angstroms thick.

45. (Previously presented) The method of claim 43, wherein the upper portion is about 10 angstroms thick.

Claims 46-48 (Canceled).

49. (Currently amended) A method of forming a structure over a semiconductor substrate, comprising:

forming a silicon-dioxide-containing layer physically against the substrate, the silicon-dioxide-containing layer comprising an upper surface;

exposing the silicon-dioxide-containing layer to nitrogen atoms, and during the exposing, the nitrogen atoms comprising a higher energy state than their ground state to provide ~~providing~~ nitrogen primarily within the upper surface of the silicon-dioxide-containing layer; and

forming conductively doped silicon physically against the upper surface of the silicon-dioxide-containing layer.

50. (Previously presented) The method of claim 49, wherein the silicon-dioxide-containing layer further comprises an upper portion and a lower portion, the upper portion including the upper surface and being spaced from the substrate by the lower portion, and wherein the providing of the nitrogen comprises an entirety of the nitrogen within the upper portion.

51. (Previously presented) The method of claim 49, wherein the silicon-dioxide-containing layer further comprises an upper portion and a lower portion, the upper portion including the upper surface and being spaced from the substrate by the lower portion, and wherein the providing of the nitrogen comprises substantially all of the nitrogen within the upper portion.

52. (Currently amended) The method of claim 49, wherein the silicon-dioxide-containing layer further comprises an upper portion and a lower portion, the upper portion including the upper surface and being ~~is~~ spaced from the substrate by the lower portion, and wherein the providing of the nitrogen comprises no measurable amount of the nitrogen within the lower portion.

53. (Previously presented) The method of claim 52, wherein the lower portion is about 10 angstroms thick.

54. (Previously presented) The method of claim 52, wherein the upper portion is about 10 angstroms thick.

55. (Previously presented) The method of claim 52, wherein the silicon-dioxide-containing layer is at least about 40 angstroms thick, and wherein the upper portion is about 10 angstroms thick.

56. (New) The method of claim 36 further comprising:

forming the activated nitrogen species comprising a first energy state; and

before the exposing, changing the first energy state of the activated nitrogen species to a second energy state that is different from the first energy state.

57. (New) The method of claim 56 wherein the second energy state is a lower energy state than the first energy state.

58. (New) The method of claim 36 further comprising forming a silicide layer over the conductively doped silicon.

59. (New) The method of claim 43 further comprising:

forming the nitrogen ions comprising a first energy state; and

before the exposing, changing the first energy state of the nitrogen ions to a second energy state that is different from the first energy state.

60. (New) The method of claim 59 wherein the second energy state is a lower energy state than the first energy state.

61. (New) The method of claim 43 further comprising forming a silicide layer over the conductively doped silicon.

62. (New) The method of claim 49 further comprising:

forming the nitrogen atoms comprising a first energy state; and

before the exposing, changing the first energy state of the nitrogen atoms to a second energy state that is different from the first energy state.

63. (New) The method of claim 62 wherein the second energy state is a lower energy state than the first energy state.

64. (New) The method of claim 49 further comprising forming a silicide layer over the conductively doped silicon.